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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,325	11/04/2003	Mark W. Brockman	68.0114CIP/DIV	4937
35204	7590	12/13/2005	EXAMINER	
SCHLUMBERGER RESERVOIR COMPLETIONS			KRECK, JOHN J	
14910 AIRLINE ROAD			ART UNIT	
ROSHARON, TX 77583			PAPER NUMBER	

3673

DATE MAILED: 12/13/2005

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/701,325
Filing Date: November 04, 2003
Appellant(s): BROCKMAN ET AL.

MAILED
DEC 13 2005
GROUP 3600

Dan C. Hu
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 11/7/05 appealing from the Office action
mailed 6/10/05.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is substantially correct: the amendment filed under 37CFR1.116 has placed claims 26 and 27 in condition for allowance.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct.

Appellant's brief presents arguments relating to the objection to claims 22-24. This issue relates to petitionable subject matter under 37 CFR 1.181 and not to appealable subject matter. See MPEP § 1002 and § 1201. The objection to these claims is maintained, and will be addressed following decision by the board.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3673

1. Claims 1-21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tubel, et al. (U.S. Patent number 5,959,547) in view of More, et al. (U.S. Patent number 5,008,664).

Tubel teaches the well having a main bore and a lateral branch; and also teaches the electrical signaling between the main bore and equipment in the lateral branch.

Tubel fails to teach the inductive coupler.

More teaches a downhole communication system comprising inductive couplers. More teaches that the inductive couplers are beneficial because they simplify handling of downhole tools, and provide for reliable communication.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Tubel system to have an inductive coupler as called for in claim 1; in order to simplify handling of downhole tools, and provide for reliable communication.

Regarding independent claim 2:

Tubel teaches the well having a main bore and a lateral branch and the connector mechanism; and also teaches the electrical signaling between the main bore and equipment in the lateral branch. Tubel fails to teach the inductive coupler.

More teaches a downhole communication system comprising inductive couplers. More teaches that the inductive couplers are beneficial because they simplify handling of downhole tools, and provide for reliable communication.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Tubel system to have an attached inductive coupler as called for in claim 2; in order to simplify handling of downhole tools, and provide for reliable communication.

More teaches the electrical cable as called for in claim 3.

With regards to claims 4-7; Tubel teaches communication to multiple bores, thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the Tubel system to have included second, third, and fourth inductive coupler portions.

Regarding independent claim 8:

Tubel teaches the well having a main bore and a lateral branch; equipemtn in the main bore and branch; and also teaches the electrical signaling between the main bore and equipment in the lateral branch. Tubel fails to teach the inductive coupler.

More teaches a downhole communication system comprising inductive couplers. More teaches that the inductive couplers are beneficial because they simplify handling of downhole tools, and provide for reliable communication.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Tubel system to have an inductive coupler as called for in claim 8; in order to simplify handling of downhole tools, and provide for reliable communication.

With regards to claims 9 and 10; Tubel teaches communication to multiple bores, thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the Tubel system to have included second and third inductive coupler portions.

Tubel shows the tubing as called for in claim 11.

Tubel teaches the electrical device as called for in claim 12.

Tubel teaches the monitoring module as called for in claim 13.

Tubel teaches the control module as called for in claim 14.

Tubel teaches the casing ("well" in fig. 3) and window as called for in claim 15.

With regards to claims 16 and 17: Tubel fails to clearly show the communication path, however it is apparent that the wiring would travel from the tubing to the connector and then to the lateral bore equipment; thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have the coupler portions attached to the tubing and connector as called for in claim 16; and to the connector and lateral branch equipment as called for in claim 17.

Regarding independent claim 20:

Tubel teaches a method of communicating including transmitting signaling between main bore equipment and lateral branch equipment. Tubel fails to teach the inductive coupler.

More teaches a downhole communication system comprising inductive couplers. More teaches that the inductive couplers are beneficial because they simplify handling of downhole tools, and provide for reliable communication.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Tubel system to have an inductive coupler as called for in claim 20; in order to simplify handling of downhole tools, and provide for reliable communication.

More teaches the providing a second coupler and electrically connecting as called for in claim 21.

With regards to claim 25, the Tubel reference teaches the connector having a receptacle; it would have been obvious to one of ordinary skill in the art at the time of the invention to have placed the inductive coupler so that the connector would have a portion as called for in claim 25.

2. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tubel and More as applied to claim 8 above, and further in view of Pringle, et al. (U.S. Patent number 5,542,472). Tubel and More fails to teach the hydraulic control line.

Pringle teaches that hydraulic control lines can be used alongside electrical signaling; in order to control hydraulic tools downhole.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the Tubel system to have included hydraulic control in order to operate hydraulic devices.

(10) Response to Argument

A: The objection to claims 22-24 is not an appealable matter. This issue relates to petitionable subject matter under 37 CFR 1.181 and not to appealable subject matter. See MPEP § 1002 and § 1201. The objection to these claims is maintained, and will be addressed following decision by the board.

B: Tubel (U.S. Patent number 5,959,547) in view of More (U.S. Patent number 5,008,664).

1. Claims 1, 20, 21, and 25:

Appellant has argued that Examiner has failed to establish a prima facie case of obviousness, specifically asserting that there existed to motivation or suggestion to combine. It is noted that appellant has not argued that the references fail to teach or suggest all the limitations of claims 1, 20, 21, and 25; nor has appellant argued that there is no reasonable expectation of success.

In response, Examiner offers this text from More: "inductive coupling desirably eliminates the need to mechanically connect the elements on which the coils are mounted, and thus greatly simplifies the handling of downhole equipment..." (column 1, line 23)

More explicitly teaches the advantages of inductive coupling over hard-wired coupling.

Appellant has asserted that text in the Tubel patent which mentions the use of an inductive coupler¹ in a side pocket mandrel provides significant objective evidence "that a person of ordinary skill in the art prior to the time of the present invention did not contemplate the use of an inductive coupler to connect main bore electrical signaling to lateral branch devices" (appellant's brief, page 7, line 6). In response; it is first noted that whether one of ordinary skill in the art actually contemplated the claimed invention has no bearing on the obviousness of the claims: if, in fact, there was some evidence that someone contemplated the invention, then a rejection might be made under 35 USC 102. Nonetheless, it is not clear that the vague disclosure of an inductive coupler in Tubel actually provides any such evidence: it is entirely possible that the inductive coupler disclosed in Tubel communicates electrical signaling in the main bore with equipment in the lateral branch as claimed in claim 1; however, since this is not explicitly disclosed in Tubel, the rejection was made under 103.

Insofar as appellant is arguing that Tubel "teaches away" from the claimed invention or that the proposed modification would render the Tubel invention

¹ The disclosure of the inductive coupler in Tubel is vague at best, Tubel discloses (e.g. column 18, lines 48-50): "In the embodiment shown in FIG. 8, the formation evaluation information is transmitted to the surface on inductive coupler 294 and tubular encased conductor (TEC) 296, both of which will be described in detail hereinafter." Unfortunately, the promised description is absent from the Tubel reference and the Tubel drawings lack the coupler 294.

unsatisfactory; this is not persuasive: it is clear that the Tubel system would function properly with an inductive coupler.

2. Claims 2-7:

Examiner's note on claim interpretation: claim 2 includes the limitation "first inductive coupler portion attached to the connector mechanism..." The term "attached" is interpreted broadly, consistent with its use in the specification², to include direct or indirect attachment. It is agreed that since Tubel fails to teach the inductive coupler as claimed, and More fails to teach the lateral connector; the references together do fail to explicitly disclose an inductive coupler portion attached to the connector mechanism; however, one of ordinary skill in the art would have known to "attach" the coupler portion to the well connector; in order to prevent it from falling to the bottom of the well, or being swept away with fluid flow.

Appellant has also asserted that there existed no motivation or suggestion to combine the teachings of Tubel and More; this argument has been answered above with respect to claim 1.

3. Claims 8-17:

² Applicant has not provided any special definition for "attached"; but the specification provides clear indication that it should be given broad meaning: "devices mounted on, or positioned, outside of the casing or liner section are attached, either directly or indirectly..." (emphasis added) specification page 7, line 11.

Appellant has asserted that there existed no motivation or suggestion to combine the teachings of Tubel and More; this argument has been answered above with respect to claim 1.

4. Claims 18 and 19:


Appellant has not made any further substantive arguments with respect to those claims; insofar as the arguments concerning motivation apply, they are treated above.

(11) Related Proceeding(s) Appendix


No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

John Kreck

JOHN KRECK
PRIMARY EXAMINER

Conferees:

Sunil Singh 

Darnell Jayne 